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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,259	12/01/2003	Leo W. Spychalla	10413US01	2950

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EXAMINER	
PAPE, ZACHARY	

ART UNIT	PAPER NUMBER
2835	

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Offic Action Summary	Application No.	Applicant(s)	
	10/725,259	SPYCHALLA, LEO W.	
	Examiner	Art Unit	
	Zachary M. Pape	2835	

-- The MAILING DATE of this c mmunication appears on the cover sheet with the c rrespondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/1/2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12/1/03* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3152004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," "The present invention", etc.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 18-20 rejected under 35 U.S.C. 102(b) as being anticipated by Lu et al. (Patent # 6,317,317). With respect to claim 18, Lu et al. teaches the use of a housing (Fig 1, 10, 30) and of a data storage cartridge (Fig 1, 20), the housing defining an access window. Placing the hard drive (20) within the housing, the hard drive including at least one electrical connection point (22 – Column 2, Lines 18-22) and aligning the at least one electrical connection point relative to the access window in at least one of an X-direction extending substantially parallel to a width of the access window and a

Y-direction extending substantially parallel to a length of the access window (as Ilustrated in assembled figure 3 showing electrical connection 22 sitting within the window), wherein the step of aligning the at least one electrical connection point relative to the access window positions the at least one electrical connection point to be accessible from a position external to the data storage cartridge via the access window (as illustrated in Fig 3 showing the electrical connection 22 available for connection to external connector 62 – Column 2, Lines 52-56).

With respect to claims 19-20, Lu et al. discloses that the hard disc (Fig 1, 20) be placed within the housing (Fig 1, 10, 30) such that the electrical connector (Fig 3, 22) be aligned in the X Y, and Z-directions to allow the connector to align with the window (and subsequently attach to an external connector 62).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-17 rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al. (Patent # 6,317,317) in view of Crockett (Patent # 6,061,231). With respect to claim 1, Lu et al. teaches a housing (Fig 1, 10, 30) defining an access window (as shown in Fig 1). Lu et al. further discloses a hard drive (Fig 1, 20) maintained within the housing, the

hard drive having at least one electrical connection point (22). Lu et al. fails to teach the use of alignment features.

4. Crockett teaches the use of at least one alignment feature (Fig 1, 20) wherein the at least one alignment feature is configured to interact with a printed circuit board (Fig 1, 22) thereby positioning the display assembly (10) within the housing. (Column 3, Lines 28-30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the housing and hard drive of Lu et al. with the alignment features of Crockett such that the hard drive is capable of being at least partially aligned the at least one electrical connector with the access window. The alignment features of Crockett allow the hard drive of Lu et al. to remain elevated from the housing reducing the risk of damage to the drive.

5. With respect to claim 2, Crockett further discloses that the printed circuit board (Fig 1, 22) includes at least one alignment feature (Fig 1, 24) to mate with the at least one alignment feature of the housing (Fig 1, 20 - Column 3, Lines 29-30), when combined with Lu et al. such features will at least partially align the at least one electrical connection relative to the access window.

6. With respect to claim 3, the hosing of Lu et al. defines a Y-direction parallel to a length of the access window, and a X-direction perpendicular to a width of the access window. The placement of the alignment features of Crockett within the housing of Lu et al. inherently restricts the movement of the hard drive in each of the x, y, and z directions.

7. With respect to claims 4 and 5, Crockett further teaches that the alignment feature of the housing includes an alignment post (as illustrated in Fig 1, 20) defining a first tier having a first diameter and extending from a first major member of the housing (the base of element 16) and a second tier having a second diameter and extending from the first tier opposite the first major member of the housing, where the first diameter is greater than the second diameter, the alignment post configured to align that at least one electrical connection point on the hard drive (20) of Lu et al. relative to the access window in the X-direction.

8. With respect to claim 6, Crockett further teaches that the at least one alignment feature of the housing (Fig 1, 20) further includes a second alignment post configured to align the at least one electrical connection point (22) relative to the access window in the X-direction.

9. With respect to claim 7, Crockett further discloses that the printed circuit board (Fig 1, 22 - when combined with Lu et al., the hard disc) comprises a mounting cavity (24) configured to receive the alignment post (20).

10. With respect to claim 8, Crockett further discloses that the at least one alignment feature (20) of the housing includes an alignment rib (Fig 1, 20 located on the front right side of 16), configured to align the at least one electrical connection point (Lu et al: 22) relative to the access window in the Y-direction.

11. With respect to claim 9, Crockett further discloses that the printed circuit board (Fig 1, 22 – when combined with Lu et al. disc drive) further includes an alignment slot (24) configured to receive the alignment rib (Crockett: Column 3, Lines 28-30).

12. With respect to claim 10, the combination of the alignment rib of Crockett and the housing of Lu et al. results in the rib being placed adjacent to the access window (Lu et al: subsequent front right corner of 30).

13. With respect to claim 11, Crockett further discloses that an alignment post (Crockett: Fig 1, 20) and when combined with the housing, disc drive, and connector of Lu et al. (Lu et al: Fig 1, 30) configure to align the at least one electrical connection point (Lu et al: Fig 1, 22) relative to the access window in the X-direction.

14. With respect to claim 12, the combination of Lu et al. and Crockett describes the claimed invention but does not state a specific tolerance range for which the electrical connector (22) must align in the X and Y direction to the access window. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a tolerance range of +/-0.005 inches, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). The use of such a value would allow the hard disc to continue to operate without causing disconnection problems while sufficiently maintaining the device within the housing and could be determined by routine experimentation by one of ordinary skill in the art.

15. With respect to claims 13 and 14, Lu et al. further discloses that the housing includes a first major member (Fig 1, 30) that forms the access window and the at least one alignment feature of Crockett (attachment pillar - Fig 1, 20) when combined with the housing, and disc drive, and electrical connector of Lu et al. is configured to align the at least one electrical connection point (Lu et al.: Fig 3, 22) relative to the access window

in a Z-direction (as defined by the height of the first and second tiers of 20) that is perpendicular to the first major member (Lu: Fig 1, 30).

16. With respect to claim 15, Crockett further illustrates that the attachment pillar (Fig 1, 20) defines a passage axially extending through the attachment pillar (as illustrated by the vertical dashed lines) and the combination of the Crockett alignment features and Lu et al. disc drive further comprise an attachment device (smaller center radius of 24) inserted through the passage and into the housing (pillars 20 are considered part of the housing) to facilitate alignment of the at least one electrical connection point (Lu et al, Fig 1, 22) relative to the access window in the Z-direction.

17. With respect to claim 16, Crockett further discloses that the at least one alignment feature further includes at least one alignment post and a rib (Fig 1, 20 located in the rear right corner, Fig 1, 20 located in the front right corner, respectively) when in combination with the housing, drive, and window of Lu et al. is configured to align the at least one electrical connection point relative to the access window in the X and Y-directions respectively.

18. With respect to claim 17, Lu et al. discloses the use of a housing but fails to define a numerical length and width. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the length and width of the housing 6 inches and 5 inches respectively, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Routine experimentation by one of ordinary skill in the art would create a housing of 6 inches in length and 5 inches in

width as an ideal size capable of conforming to most any standard hard disk drive and further being capable of easily fitting within a standard desktop or notebook computer.

Please also note patent numbers: 5,402,308; 6,762,932; and 5,886,850

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary M. Pape whose telephone number is 571-272-2201. The examiner can normally be reached Mon. - Thur. & every other Fri. (8:00am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached at 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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